

Supplemental Table 1

Gene	Whole Lung				CD45- Cells		CD45+ Cells	
	5 days post-infection		8 days post-infection		5 days post-infection			
	placebo	5mg E3	placebo	5mg E3	placebo	5mg E3	placebo	5mg E3
<i>Cxcl1</i>	7.3380	1.4640	6.4330	3.1270	1.0512	3.9823	0.1176	1.5588
<i>Cxcl2</i>	11.7400	2.1500	10.6300	6.7100	2.4332	3.1059	1.9910	2.1291
<i>Cxcl3</i>	8.4180	2.7330	7.5230	-2.0210	2.0022	3.1164	3.3233	3.1876
<i>Cxcl5</i>	7.4640	0.8025	8.9960	3.3760	3.2129	3.9588	7.0745	8.5423
<i>Cxcl9</i>	11.3700	1.9790	4.9010	3.3970	9.1621	11.3114	8.9003	3.4743
<i>Cxcl10</i>	10.5700	4.1440	6.5360	2.8380	5.2886	5.7036	7.0949	6.1530
<i>Cxcl11</i>	8.5180	-1.4920	13.6700	6.7790	9.0202	0.9854	6.8339	7.4820
<i>Cxcr1</i>	3.7640	0.5261	0.3263	1.5040	-1.0711	0.1896	-0.2228	0.3364
<i>Cxcr2</i>	5.3580	-0.4318	3.6420	0.8722	0.8703	1.7118	0.4856	0.5166
<i>Cxcr4</i>	1.3510	-1.5280	1.4170	-0.3852	0.1267	-0.1306	0.0013	0.6743
<i>Ccl1</i>	2.8580	-2.5120	7.6810	3.6880	5.0297	-1.4292	0.0694	0.9645
<i>Ccl2</i>	6.5730	2.8290	8.5420	6.9850	4.4241	5.4457	5.2008	3.8891
<i>Ccl3</i>	4.5160	-0.0416	4.8070	2.5830	2.2258	1.9801	1.9964	1.8977
<i>Ccl4</i>	10.4300	-0.0499	11.0400	3.1100	2.8152	3.4065	2.9642	2.0466
<i>Ccl5</i>	1.5660	-0.7292	3.5460	1.7510	5.1432	3.3263	0.6740	0.3662
<i>Ccl7</i>	8.7000	3.4450	10.3500	7.0180	3.9216	6.5766	5.3290	3.1627
<i>Ccl8</i>	5.5090	1.2840	8.0330	5.2340	1.7078	5.1665	2.8904	2.7982
<i>Ccl11</i>	1.5800	1.5570	2.5620	4.2200	0.6701	3.8415	2.7681	1.7732
<i>Ccl12</i>	3.2520	1.5730	5.4330	4.9690	5.5702	5.2568	6.4811	4.0202
<i>Ccl17</i>	-0.7291	0.1972	-1.6440	-0.4202	-1.3279	1.3309	-0.2117	1.5719
<i>Ccl19</i>	-0.0837	-0.1489	1.5480	2.4320	1.3560	2.4386	3.7457	8.7751
<i>Ccl20</i>	10.3700	3.2480	9.9340	5.0690	3.5229	3.8406	6.2430	7.9249
<i>Ccl22</i>	0.2244	2.1590	-0.7493	3.0910	4.4433	1.5924	-0.4587	1.3911
<i>Ccl24</i>	-2.3060	-1.8020	-2.2830	-1.0140	-1.5476	1.5577	0.3462	-0.0170
<i>Ccl25</i>	-1.2590	-2.5660	-0.3049	-1.1310	-0.5063	0.3522	0.3173	2.1993
<i>Ccr1</i>	4.7340	-0.1249	6.1010	2.8480	2.3018	2.0684	1.5460	1.2719
<i>Ccr2</i>	0.4464	-2.0860	2.4330	0.3701	2.5899	1.2668	0.9934	1.1825
<i>Ccr3</i>	1.0670	-1.6120	2.9400	1.7400	3.5352	2.2632	1.9343	1.8303
<i>Ccr4</i>	-1.1460	-1.5440	0.3872	1.1670	4.1052	2.2749	0.1241	0.7555
<i>Ccr7</i>	3.1390	-1.8630	4.2840	1.3920	0.2832	-0.0505	-0.6412	0.7902
<i>Ifng</i>	8.2500	-1.5350	11.2800	4.5980	-0.0134	1.4857	0.3726	0.6381
<i>Tnf</i>	11.0300	-0.0273	11.6500	1.6260	5.5473	1.7123	-0.0769	-0.1384
<i>Il6</i>	12.1300	5.4820	10.2600	6.8600	1.8989	4.0114	1.7953	1.0640
<i>Il1a</i>	1.5820	-1.4270	-0.1061	-0.4293	1.0839	1.0521	0.9608	1.4934
<i>Il1b</i>	4.0890	0.9010	3.6660	2.5470	2.9443	1.6846	1.4116	0.8854
<i>Il1r1</i>	0.6494	-1.1410	0.4660	-0.8695	0.0098	2.2848	-1.4553	0.5118
<i>Il1rap</i>	0.6630	-1.1370	0.1190	-1.3920	-0.0548	0.3507	0.4951	1.0301
<i>Il1rn</i>	6.6500	1.9300	6.5250	3.9010	4.6086	2.6533	3.2535	2.5133
<i>Il5</i>	-0.1841	-1.4300	-0.6610	-1.3780	0.3770	-0.9502	0.6789	1.4552
<i>Il6ra</i>	0.8219	-1.9800	0.2890	-2.2820	-0.2315	-0.3520	-0.7263	0.8976
<i>Il7</i>	-0.5872	-1.8860	-1.1150	-1.5560	-1.0590	0.3732	-0.7157	1.2769
<i>Il9</i>	-0.7778	-1.7110	-0.7545	-0.1043	-1.8372	0.9386	6.8118	4.9181
<i>Il10</i>	4.9840	2.6610	9.9770	7.3750	-0.0218	2.9742	1.4653	1.6316
<i>Il10rb</i>	0.3975	-1.9150	0.6975	-0.4979	-0.4789	0.0997	1.2764	0.9106
<i>Il17a</i>	-1.7870	-1.3510	-1.3090	0.4341	0.9593	0.4612	-0.0699	0.4017
<i>Il18</i>	0.2894	-0.5934	-0.1998	-0.0442	-1.0204	0.0296	-0.5414	0.0841
<i>Il22</i>	-1.1200	-1.7110	-1.0970	1.0100	-2.3448	-0.1630	1.7385	5.9626
<i>Il23a</i>	6.5400	0.6594	4.0510	1.0590	0.9361	0.9512	1.7413	2.5008
<i>Il23r</i>	4.7900	0.7357	7.4610	-2.5370	-1.1063	-0.4692	-0.9573	0.4915
<i>Tlr1</i>	1.7930	-0.2136	3.6630	1.9420	6.1008	9.9090	1.9021	0.9238
<i>Tlr2</i>	2.6220	-0.2501	2.5850	-0.0731	1.7750	1.2884	0.0346	0.0596
<i>Tlr3</i>	1.3300	-0.5415	0.9393	0.3880	1.2923	0.8532	0.9135	2.8965
<i>Tlr4</i>	0.9734	-0.3587	1.3880	0.0757	-0.3730	-0.1718	0.0759	0.0757
<i>Tlr5</i>	0.6149	-1.8280	-0.0997	-1.3120	-1.0010	-0.6913	-0.5262	-0.4927
<i>Tlr6</i>	4.9550	-2.2030	5.8230	1.2280	1.2805	2.0390	0.7574	0.1321
<i>Tlr7</i>	2.1780	-0.1008	3.4080	0.5841	4.2745	2.7819	0.6708	-0.1786
<i>Tlr9</i>	4.7820	-0.0633	5.1010	1.0030	2.0832	-0.0497	3.2220	1.0732
<i>Tollip</i>	-0.3254	-0.7558	-0.7703	-0.9442	0.3232	-0.2887	0.0393	-0.4751
<i>Tirap</i>	1.0110	-0.4847	1.6730	-0.0546	-0.0207	0.0332	-0.6134	0.3032
<i>Myd88</i>	0.8871	0.0595	1.4600	0.4186	0.4192	0.5770	-0.1490	0.8739
<i>Nfkb1</i>	-0.0561	-0.6261	-0.0006	-0.3621	0.0480	0.1196	0.5560	0.2269
<i>Itgb2</i>	2.4900	-0.5359	3.4890	0.3184	1.1715	0.5395	-0.0219	0.0223
<i>Sele</i>	4.2200	-1.6380	2.6780	-1.2500	1.7258	0.5426	-0.1468	-0.5021
<i>Bcl6</i>	0.1967	-0.9551	1.7760	0.0764	-0.3123	0.3936	0.7143	0.8720
<i>C3</i>	1.4310	-1.7830	1.8930	0.3505	1.1552	1.7271	1.1857	1.9854
<i>C3ar1</i>	2.1040	-0.7190	4.8210	3.5960	2.3672	1.4130	4.8715	3.9882
<i>C4b</i>	0.9511	-1.5270	2.1520	0.1554	0.7531	1.6211	2.7332	3.6610
<i>Cd14</i>	0.8770	-0.3991	0.8647	0.2899	1.8285	2.6033	1.2120	1.3037
<i>Cd40</i>	3.2530	-1.1300	4.7240	0.9290	0.8917	0.6913	2.9450	2.3158
<i>Cd40lg</i>	1.7900	-3.4340	4.5610	0.4816	-1.6982	0.4542	-0.1117	0.0941
<i>Cebpb</i>	-0.0059	-1.3430	0.2965	-0.3782	0.1706	0.7081	-0.3552	1.0860
<i>Crp</i>	0.1099	-0.1261	0.0255	-0.1043	3.2299	-3.8599	2.0193	-4.1756
<i>Csf1</i>	1.2600	-1.5980	0.4597	-0.3896	0.8903	0.4636	1.8130	1.8570
<i>Fasl</i>	2.4990	-0.5195	4.8110	0.5329	-0.1966	0.7494	0.2061	-0.2803
<i>Fos</i>	-0.1286	-1.6280	0.1080	-0.9296	-0.7482	-0.2562	0.4424	1.4072
<i>Kng1</i>	-1.7560	-1.7110	-2.4820	-0.1043	2.8957	2.3682	5.5817	1.6665
<i>Lta</i>	4.9230	-2.1350	2.8110	-1.9020	-2.7533	1.1967	-0.0422	0.1669
<i>Ltb</i>	0.6311	-0.7274	1.6840	1.1500	3.4008	1.1235	-1.0453	-0.3002
<i>Ly96</i>	1.3210	-0.7122	1.9690	0.0467	0.5290	0.3401	1.5630	0.3318
<i>Nos2</i>	0.9525	-0.5867	0.0639	-0.0764	-0.1665	-1.1689	4.3749	4.9552
<i>Nr3c1</i>	-1.0450	-1.0650	-0.9847	-1.1750	-0.3184	-0.0096	-0.6116	-0.1868
<i>Ptgs2</i>	1.6110	-1.2830	0.4057	-0.7272	-0.0976	0.8207	0.6378	-0.2934
<i>Ripk2</i>	0.8491	-0.3721	0.9709	0.4820	0.7048	0.5314	0.3842	-0.0636
<i>Tnfsf14</i>	0.3516	-0.2546	0.9341	0.5846	3.2670	1.0736	0.8798	-0.1187

Supplemental Table 1. Inflammatory gene expression in whole lung and sorted cell populations. Female C57BL/6 mice received a subcutaneous implant containing either 5mg estriol (E3) or a placebo (cholesterol) control, followed by infection with a sublethal dose of influenza A virus (IAV) or vehicle (mock). Relative gene expression was measured from whole lung at 5 (n = 4 animals/treatment) and 8 (n = 3 animals/treatment) days post-infection (dpi), and from CD45- and CD45+ sorted cell populations at 5 dpi (n = 3-4 animals/treatment). The table contains the average gene expression (\log_2 fold induction) for each experimental group relative to its respective mock-infected control. All data were analyzed using multiple *t* tests, corrected for a false discovery rate of 5%, with a corrected *p* value < 0.05 was considered significant, and the corresponding values are bolded in the table.